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(19) **United States**(12) **Patent Application Publication**
BITAULD(10) **Pub. No.: US 2016/0337045 A1**(43) **Pub. Date: Nov. 17, 2016**(54) **RECEPTION AND GENERATION OF LIGHT**(52) **U.S. Cl.**(71) Applicant: **NOKIA TECHNOLOGIES OY**,
Espoo (FI)CPC **H04B 10/70** (2013.01); **H04B 10/85**
(2013.01); **H04B 10/532** (2013.01)(72) Inventor: **David BITAULD**, Cambridge (GB)

(57)

ABSTRACT(73) Assignee: **Nokia Technologies OY**, Espoo (FI)(21) Appl. No.: **15/112,571**(22) PCT Filed: **Feb. 6, 2014**(86) PCT No.: **PCT/IB2014/058838**

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A light input is divided into a plurality of light outputs by a structure comprising a first beam splitter configured to divide the light input into a first part and a second part, a first polarization beam splitter configured to provide from the first part a first polarized part and a second polarized part, wherein the first polarized part is for providing a first output and the second polarized part for providing a second output, at least one polarization altering device configured to alter the polarization of light in the second part, and at least one second polarization beam splitter configured to receive light altered by respective at least one polarization altering device and provide therefrom at least one third polarized part for providing at least one third output. A light output can be generated based on similar principles in reverse.

